

# Country Life.

---

TRAVELING LIBRARIES.

---

GOOD ROADS.

---

By HARRY H. STONE, M.A.,

Professor of Applied Mathematics and Librarian, Emory College, Oxford, Ga.

President Board of Education of Newton County, Ga.



From the METHODIST REVIEW, Nashville, Tenn.,  
July-August, 1901 and July-August, 1896.





# COUNTRY LIFE AND TRAVELING LIBRARIES.

---

BY PROF H. H. STONE, M.A.,

*LIBRARIAN EMORY COLLEGE, OXFORD, GA.  
PRESIDENT BOARD OF EDUCATION NEWTON COUNTY, GA.*

---

From the *Methodist Review*, Nashville.  
July-August, 1901.

## COUNTRY LIFE AND TRAVELING LIBRARIES.

BY HARRY H. STONE, M.A.,

PROFESSOR OF APPLIED MATHEMATICS, EMORY COLLEGE, OXFORD, GEORGIA.

FROM time to time the attention of the thoughtful and patriotic has been called to the fact that the growth of our cities is all too rapid, while the slow increase of the population in the rural districts drags its weary length along, sometimes having a value approaching perilously near the vanishing point. At the beginning of the nineteenth century, ninety-six per cent. of the population of these United States lived in the country; at the end of the century, less than seventy per cent.

Of the total population of Georgia, the people living in the rural districts, according to estimates made for me by the Department of Labor (United States Government), were in 1860, 94.12 per cent.; in 1870, 93.56 per cent.; in 1880, 92.68 per cent.; in 1890, 89.16 per cent.; and in 1900, 89 per cent. These figures, however, fail to present the subject in all its seriousness, since in government estimates the population of towns when less than eight thousand is classed as rural population. Should the population of towns be so classed only when one thousand or less, the percentage of urban over rural population would be materially increased.

In some cases entire families emigrate to the city. In others, where the old folks by reason of long association remain on the farm, the boys, one by one as they come of age, turn their backs on the life of their youth and in town seek other means of livelihood.

In our cities many of the foremost citizens are country reared, and have brought with them to their new homes and business that sturdy manhood and robustness of character incident to normal country rearing, and which is so frequently lost to the stock after city associations of one or two generations. These make great successes as city business men. Had they stayed by the farm, they might possibly have done as well financially, and at the same time have demonstrated to the world that true farming is not a matter of mere muscle, but is a highly intel-

lectual pursuit and requires business and mental ability of a high order.

The growth of our city population is made up largely from the best products of the farms, while our rural population is receiving but few additions from the outside. While there should be a constant interchange between town and country to secure the best health of the body politic, yet where much strength is given by the country and but little received from the city, either the doctor must interpose his services or else there may be a call for the undertaker.

The tenant class, which is rapidly forming our rural population, is composed at present of both white and colored people. Many of the better class of white tenants are moving to factory villages to secure what seems to be more remunerative employment. They are dazzled by the handling of a greater amount of cash, and are forgetful, or else fail to see the fact that one hundred dollars in the hands of a factory operative with everything to purchase cannot go so far in supplying the needs as one-half that amount in the hands of a farmer whose daily needs are mostly supplied by farm products. Nor do they seem to appreciate that still more important fact that the growth of their higher nature which cannot be measured in terms of currency is more or less stunted by factory walls. The small amounts received each week for the labor of their boys and girls is largely blood money, for which is sacrificed the intellectual development of those whom they hold dearest. The percentage of the children in factory communities attending school is very much smaller than that in agricultural districts.

Many of the white tenants, while nominally farmers, have but little interest in their business. They try to get everything possible out of the rented farm in one or two years' time, expecting then to try another community, since by that time their credit, as well as the producing quality of the land which they are subjecting to abuse, will have been largely exhausted. Little need be said concerning the negro tenants, as they are proverbially economical as to labor and careless as to methods of cultivation.

If we expect the State to advance in wealth and influence, her agricultural interests, the very groundwork and foundation of

all prosperity, must not be intrusted to the hands of the shiftless and the ignorant.

Ill fares the land, to hastening ills a prey,  
Where wealth accumulates, and *men* decay.

If, at the present, there is any failure in the outcome of the farm, it is because of mistakes as to methods and means employed, and not in the capabilities of old Mother Nature, who stands ready to enrich all who understand her secrets, but who turns a deaf ear to the careless and indifferent.

It behooves the patriotic to inquire into the causes of this increasing desertion of the farm for town life by so many of the better class, and, having found the causes, to use their best efforts to stop the movement and turn the current in the other direction.

Man is a social as well as an intellectual being. It is to be doubted if any greater punishment has ever been devised by the ingenuity of man than solitary confinement. If now to the lack of companionship there be added a dearth of intellectual food, then of all beings is that man most miserable.

In the country under present conditions social intercourse is at a discount at all times, by reason of distance, which distance is more than doubled in bad weather by the highways of mud and ruts which are through courtesy to the law called public roads. But should there be near neighbors, yet there might be lack of neighborliness; or far worse, that social intercourse which retards rather than promotes intellectual growth. The youth finds a scarcity of that which appeals to the higher side of nature—that contact of mind with mind which comes in social intercourse and business relations—and the growing mind must seek elsewhere for food upon which it may find nourishment.

The country home, as we frequently find it, has but few attractions for the children. Work, work, work is continually dinned in their ears; nor are any pains expended to arouse an intelligent interest in their work, until after a time work becomes mere drudgery. The trip to town some Saturday afternoon is looked forward to with keen interest both as a rest from toil and as in some sense a time of intellectual quickening. New sights and scenes spring to the mind, and the town soon be-

comes associated in the country-reared child's mind with opportunity and progress. The young mind growing with the body craves something upon which to feed. The range of observation and information on the farm is limited when books are not at hand. Questioning father and mother fails to satisfy, and too frequently awakens a distrust as to the superiority of their knowledge. With little at home to feed upon, the mind must remain stunted, or else become so dissatisfied with its surroundings as at the first opportunity to leap the bounds and seek new fields for pasturage.

Finding the difficulty to be of a twofold nature as it affects both the social and intellectual sides of life in the country, the question presents itself, What can be done to remedy the defects in country life, to improve the social conditions and strengthen and develop the intellectual lives of our rural population?

First and foremost, I should say, *Construct a system of good roads.* This lies at the base of all rural life, whether viewed from a financial, social, intellectual, or religious standpoint.<sup>1</sup>

Secondly. If property owners, instead of building near the centers of their farms, would build on adjacent corners, thus forming thickly settled communities or farm villages, there would be a great increase in neighborly opportunities for doing good and getting good in more ways than would at first appear.

Thirdly. Rural free delivery of the mails is a constantly growing factor in making country life more attractive. As an illustration: Our local postmaster informs me that the free delivery has largely increased the volume of mail matter passing through this office. There is one carrier who goes out from this office, and his route covers a territory about six miles in diameter, which before the free delivery was established was served exclusively by this post office. The delivery has been in operation for six months. Prior to its establishment, the territory covered by it would furnish on an average five or six letters a day; while at present, about twenty. Then, two magazines were received; now, there are possibly a half dozen. Then, there were no daily papers received; now, there are four. The mail matter of that section of the country has been increased

---

<sup>1</sup>See THE METHODIST REVIEW, July-August, 1896.



400 or 500 per cent. The carrier's report for March, 1901, is as follows:

	Letters.	Postal Cards.	Papers.	Circulars.	Packages.	Total.
Delivered on Route.....	497	86	1,061	287	87	1,998.
Collected.....	464	29			6	513.

The use of the telephone in our country communities is at present in its infancy, but it is destined in the very near future to play an important part in our rural life. It is being rapidly introduced throughout our country districts, and with great satisfaction. As an illustration: One case in Newton county (Georgia) presents itself with peculiar interest to me, where a number of the Adams family—some eleven households—living in a somewhat thickly settled community, have connected their homes by a private system of telephones. Such an object lesson cannot fail to be beneficial.

But it is not in the province of this paper to discuss at any length the social needs of our rural communities, nor to attempt even a catalogue of them. We would call attention, rather, to some of the difficulties in the way of proper *intellectual* development. First, then, we would say that the public school system should be improved; and while this paper is not intended as a discussion of the public school system, yet a few hints or suggestions may not be out of place.

In some counties, in fact in most counties, we have too many schools—falsely so called—wherein one underpaid teacher is expected to attempt the impossible, namely, to teach all comers between the ages of six and eighteen in all the subjects usually catalogued in our graded schools. The human mind, not to say human endurance, finds its limit.

The schools could be made better by relocation. Except under unusual circumstances, they should not be less than four miles apart. There being fewer schools, better salaries could be paid and a better grade of teachers secured. More teachers could be placed at one schoolhouse. Instead of two spelling shops with one teacher each, receiving the pay assigned a principal, there would be a single school with two teachers; and should one receive the pay of an assistant, there would be a saving in the salary account. With fewer grades to instruct, the teachers could devote more time to each grade, and the individual scholar would receive more attention at the teacher's hands.

Sometimes, in a sparsely settled neighborhood, it might be cheaper and better in every way to furnish to the local pupils free transportation to a school a few miles removed. At present eighteen states, containing about half the population of these United States, have laws allowing free transportation to pupils at the public expense. Thirteen of them are making use of this privilege. Massachusetts expends large and increasing sums annually in this way. During the school year 1889-90 she paid out \$22,000, while in 1898-99, \$124,409.

It is claimed among many other advantages that free transportation improves the health of the pupils; increases the attendance from 50 to 150 per cent.; practically abolishes truancy and tardiness; creates the greater interest and enthusiasm in school work usually attendant upon greater numbers; and in drawing more distant communities together tends to promote social intercourse. Even where the school is a large one, if some of the advanced grades have but few pupils in them it might pay to furnish them free transportation to other schools, and thus liberate their teacher for better work with the remaining grades. Our country schools need very much more money expended on them, so as to secure, first, better teachers; secondly, the lengthening of the school term to at least seven months; and third, the building of better schoolhouses. The greater number of the buildings now in use in our rural communities are a public reproach. Should they be compared with the average barn in the same community, they would suffer badly in the comparison. Better equipments, too, are needed, as but few schools have comfortable desks, and a still smaller number are provided with sufficient blackboards, globes, maps, or charts.

Is the object of the State, in providing this great machine which we call the public school system, to teach our children merely to read, write, and cipher; or has it that grander and nobler purpose, to teach them to use their God-given mental faculties and to think? Mere "going to school" is worth little if the habit of thinking and reasoning be not acquired. If this latter be the object, then is there necessity to develop and strengthen everything which will arouse and quicken mental activity in our children, and everything which will make them see more clearly the possibilities of their surroundings and arouse their interest in the development of the same.

Our children in the country stand near to Mother Nature's heart, and the study of plant and animal life can be largely pursued at first hand. So many of us have eyes, yet we see not; hands have we, yet we handle not. We need to use and develop the faculties with which we are endowed. The hope for broadening and developing the minds of the young in our rural districts is at present almost entirely in the public school teacher, and his most powerful instrument is the cultivation of the love of reading. In many cases this love of books needs to be developed from a very small beginning, practically needs to be created; in others, it requires but a wise hand to direct it into proper channels. As the teacher succeeds in this, so does he magnify his position, and multiplies his influence for good; so does he add new dignity and self-respect to the high calling of a teacher. By his suggestions and counsel many feet may be turned into the paths of literature and learning; and without his interest and help, the doors of the finest libraries remain closed, and ignorance and narrow-mindedness could be traced in the dust on its shelves.

The object of reading should not be amusement alone, but instruction as well. Some parents object to the reading of fairy tales and novels by their children; and while the reading of fairy tales may be largely a waste of time in the older reader, yet in the young it serves to develop the imaginative faculties, without which many of the pleasures of life are lost and many of its tasks made irksome. While it is true that too much fiction, like too much play, is hurtful, and will not develop the better qualities to the best advantage, yet it must be remembered that by no other means can many subjects be so vividly and clearly presented to the popular attention as through the novel. What an influence for evil was that false picture of Southern life drawn by Mrs. Stowe in "Uncle Tom's Cabin," a book largely responsible for one of the most bloody wars of the world's history.

So, by what means can the rising generation be so vividly impressed with the indignities attendant upon the reconstruction period as by viewing those scenes sketched with a masterful hand by Page in his "Red Rock"? Or where is there so breathing a picture of that carnival of blood, the French Revolution, as is found in the "Tale of Two Cities," by Dickens? The

books written for boys by Mr. Henty, and sold by the multiplied thousands, are but a series of novels traced with an historic background. Such books as those mentioned above tend rather to create or develop a taste for history than to destroy it. The strengthening effect of history and biography is too universally recognized to need more than a mere mention, but often the history is too dull to attract or interest the untrained mind. Many times our histories are so condensed and stripped and bare that they are hardly more than skeletons; and I have yet to see the first youngster, male or female, who has any peculiar love for graveyards.

Who can question the broadening effects on the mind which travel exerts? The visit to the county site has its effect on the young mind, country bred; and if the trip be more extended so that it may take in the city at the state fair season, subjects for thought and speculation are stored up for future consideration. When trips of any length are impossible, a good substitute is the reading of some of the many books of travel. Most of such works, put on the market in recent years, are written by specialists who weave into the story of travel many incidents of history and biography.

The ordinary country home furnishes but little mental food. An examination of the tables and shelves would probably bring to light these four books:

1. Some government publication sent by the district congressman, with purpose rather to influence the vote of pater-familias than to furnish mental pabulum to that august personage, or to instruct any one of the household.

2. The almost unavoidable subscription book, generally made for the purpose of sale, composed largely of sickly sugar-coated essays on moral or religious subjects, and too frequently illustrated with impossible pictures. What educational value can a picture containing a green cow or a purple calf have to a wide-awake boy or girl. The matter in the average subscription book is about as helpful as an educator to self-reliant, manly manhood and womanly womanhood as the study of pink dogs and lilac cats in their illustrations would be helpful in the development of true taste in coloring.

3. The cheap song book, sold by some peripatetic singer; made, it is feared, more to be sold than to advance the cause of

the Master; filled with all kinds of maudlin sentiments and "jig-ity-jig" tunes, until the children by its common use have but little conception of the true nature of the life and mission of the Man of Galilee.

4. The family Bible. This, the Book of books, we find generally in an unwieldy size and too handsomely bound for common use. The children are forbidden to handle it, for fear of scratching its backs or soiling its pages.

What can a growing mind do for food in such a desert? Can we by any stretch of the imagination think that the parents in the household are treating their children fairly—are they treating themselves fairly? Do their duties stop at providing food for the body? They do this much for their calves and pigs. Is there no claim for mental food? Is there no desire for intellectual growth? Books must be furnished. Newspapers and magazines may supplement, but must not supersede, books.

What a blessing to a child is a good book! And if it be filled with truthful pictures, its value is by no means lessened. Any book does him good if it confirms his observation or quickens his thought.

This question, then, presents itself for solution: How can books be best brought to the attention of our rural population? (1) Will they be purchased by the readers? We can hardly think that there will be many individual purchases until the taste for reading is more generally developed and the habit more firmly fixed. (2) Can the libraries as at present constituted be relied upon to do the work? The great collection of books magnificently housed is indeed a powerful instrument for good in the land, but that, like the great university, while a necessity, can hope to reach but a small part of the people.

The small local library, by reason of its scanty and uncertain income, must needs be limited in its range of subjects and their treatment. The few books on its shelves are soon read through, and its patron has exhausted its resources before he can have attained much intellectual growth. We need, rather, some instrument which, like the common schools, is of such general use that all may be without excuse for not making acquaintance with the master minds and ruling thoughts of the ages, whether expressed in fiction, poetry, philosophy, or science; and the controlling ideas of the past, whether embodied in men or govern-

ments, and handed down in biography or history. The books, to be useful, must be brought near to hand. Books must be first brought to the people, if we expect to bring the people to books. Food out of reach cannot strengthen. In many cases it is necessary not only to put the food in reach, but to coax the patient to partake of the nourishment.

Here comes in the function of the traveling library; and that we may better understand its scope and aim, it may be well to call attention in more or less detail to some traveling libraries now in successful operation. One conspicuous example is the "Stout free traveling libraries" of Wisconsin. Mr. Stout, finding out by inquiry that the books in a large town library were of but little use to the country population on account of the difficulty of obtaining and returning books, instituted at his own expense a system of traveling libraries which could be carried to the homes of the people, where they would be of easy access to the rural population. The State Library Commission of Wisconsin has acted too on the same lines. Each library contains about thirty volumes, packed in a portable bookcase, and is sent out on payment of a fee of one dollar to local library associations. They are usually kept in some farmhouse, country store, or post office: fully two-thirds of the traveling libraries are kept in farmhouses.

Mr. Frank A. Hutchins, secretary of the Wisconsin Free Library Commission, writes as follows:

The traveling library gives an abundant supply of wholesome literature to the people in small communities at a slight cost, and not only excites their interest in such literature, but confines their reading to it until their tastes are formed. It is a free day and night school, which does not close on Saturdays or Sundays or for long vacations. It instructs, inspires, and amuses the old as well as the young, and its curriculum is so broad that it helps the housewife in the kitchen, the husband in the field, the mechanic in his shop, the teacher in her school, the invalid in the sick room, the boy in his play, and the citizen in his civic duties. It leaves no room for bad literature, and keeps it from circulating without resort to threats, by the most natural and wholesome methods.

Possibly New York has the most elaborate system of traveling libraries in the United States. Mr. Herbert B. Adams, of Johns Hopkins University, in a recent Home Education Bulletin issued by the University of the State of New York, has this description of the system:

At the present time the state of New York not only nobly encourages schools, colleges, and universities, extension teaching and study clubs, but popularizes the public library and extends it to the very hamlets and homes of the people.

Traveling libraries are now lent by the state library in Albany to any public library on application by its trustees, provided the library is in the university system. Any community not yet possessing a public library, on application of twenty-five resident taxpayers, can receive a traveling library to serve as a nucleus. The same privilege is extended to schools, extension centers, clubs, and, if funds permit, to granges, lodges, and other organizations having special need of books. Certain guarantees, fees, or deposits are required. The usual fee is one dollar for each twenty-five volumes, paid in advance. Schools are allowed to retain the library till the end of the current academic year. Other educational organizations, like Chautauqua, return the books when the educational course or study period is ended.

There are in New York several different kinds of traveling libraries, general and special, altogether about five hundred. Some are selected for general circulation in the community, and some for the special use of a study club. There are young people's libraries; selections of juvenile literature; academic libraries for schools and colleges; agricultural libraries for farmers' institutes; and teachers' libraries.

Communities preferring a considerable variety of books to suit varying tastes may take more than one library at a time, and thus popular demand for a public library is rapidly produced. On the other hand, local classes or study clubs in some special branch of history, literature, art, or science are fostered by a select library on one great subject. The writer has seen such special collections on French history, American history, political economy, etc. Unless one has witnessed the stimulating effect of the traveling library on a rural community or study club, he cannot fully realize the beneficial influence of this modern instrument of popular education.

Several other states, notably Massachusetts and Pennsylvania, have systems of traveling libraries conducted on an extensive scale, with more or less difference in the details; but New York, cited above, may serve as a type for them all. It might be more profitable to consider the subject in its relation to some one of the Southern states, say Georgia, and use as an object lesson work being done on this line in some section of that state.

The board of education in Newton county (Georgia) has for a number of years had a reference and circulating library located in the office of the school commissioner, for the use of the teachers in the public schools; but its usefulness has been limited. Two years ago (1899), having a small amount of money available, it was determined to make an experiment in the way of furnishing small collections of books to the various schools.

of the county. It was hoped that with their use habits of reading would be formed by the pupils, and that finally through the pupils the community at large might have a better appreciation of books. The board was greatly handicapped in the selection of books, (1) by the smallness of the money available; (2) by the fact that the greater part of the better class of juvenile books are relatively high priced, all being copyrighted; and (3) that most of the readers to be provided for were either very young or else had received but little intellectual training.

When the books were received, they were sorted out in collections from thirty to fifty, and placed in boxes. The boxes are 28x10x7 inches inside measurement; the corners are bound with iron; they have handles on each end, and have uniform locks. Each teacher is provided with a key. The libraries are locked in the commissioner's office, and can be opened only by the teacher's key. The size and shape of the box make it convenient to handle and to transport, it being of such size that it can easily be carried in the foot of a buggy. When a school has had the use of a library for six weeks or two months, the box is locked and returned to the office of the county school commissioner, who then issues another.

The idea at first was to have the libraries transferred from one school to another; but this was discarded, and it was thought best to adopt the plan used by the telephone systems in our cities—one central office, with the circuit radiating from it; so each library must be returned to the commissioner's office located in the county courthouse, where it can be exchanged for another. Constantly passing from community to county site makes this a method of exchange effected with greater ease and convenience than that of sending on the library from school to school; while it affords the commissioner opportunity for a better supervision of his cases and their contents, and the better adaptation of library to community.

There are twenty-seven white schools in the county, and at present thirty-eight libraries. In each library is a Webster's Academic Dictionary, and by way of a general reference work that *multum in parvo*, "The World's Almanac." Besides these two, not many books are duplicated in the thirty-eight boxes composing the system. An idea of the scope of these libraries



can be obtained from lists of the contents of some of them. I have selected at random boxes Nos. 24 and 36:

CONTENTS OF Box No. 24.—Webster's Academic Dictionary; History of Germany in words of one syllable; Knock About Club in North Africa; Three Vassar Girls in the Holy Land; A Boy of the First Empire, Brooks; The Knights of the Round Table; Little Women, Alcott; Mohun, John Esten Cooke; Lorna Doon, Blackmore; Old Curiosity Shop, Dickens; Thrift, Smiles; Child's History of England, Dickens; Tour of the World; Children of the Abbey; Twilight Stories; In Story Land; Tanglewood Tales, Hawthorne; Plutarch's Lives; Alice in Wonderland, Carroll; Child's Garden of Verses, Stevenson; The Best Letters of Lord Chesterfield; Mother Goose; Ten Times One is Ten; Child's Story of the Bible, Foster; Stories of England; Science Ladders, Vol. I.; Queer Stories for Boys and Girls; Young Folks' Recitations; Cats and Dogs; Animal Life; Songs and Stories; Fairy Life; Chatterbox, 1898; The Yemassee, Simms; Christmas Stories, Dickens; Robinson Crusoe, De Foe; Lay of the Last Minstrel, Scott; The World's Almanac, 1900; Life of Hannibal; Life of Nero.

CONTENTS OF Box No. 36.—Webster's Academic Dictionary; Zigzag Journeys in the Occident; Roman Life in the Days of Cicero; The Dragon and the Raven, Henty; Life of Robert E. Lee; Life of Crockett; History of Spain; Life of Pyrrhus; Poe's Poetical Works; Lorna Doone, Blackmore; Peter the Pilgrim; Bride of Lammermoor, Scott; Vicar of Wakefield, Goldsmith; The Cat of Bubastes, Henty; Animal Land; First Steps in Scientific Knowledge; Social Evenings; The Burial of the Guns, Page; Stories of Great Americans; Bracebridge Hall, Irving; Stories of Industry, Vol. I.; Storyland of Stars; Autobiography of Benjamin Franklin; Stories for Little Readers; In Mythland; The Last Days of Pompeii, Bulwer; Enoch Arden, Tennyson; A New Baby World; Chatterbox, 1896; The World's Almanac.

On the inside of the top of each box is a list of the books contained in that library, and also a copy of the rules governing the conduct of the library. The following are the rules which have been used most satisfactorily:

1. The teacher, or some pupil appointed by the teacher, shall act as librarian.
2. The teacher shall in either case have the general supervision of the books, and see that they are not unnecessarily injured or lost.
3. No book can be taken from the library until it has been charged to the borrower, on the library record book, by the teacher or librarian.
4. No person will be allowed to have out more than one book at a time.
5. No book can be kept out of the library by any person longer than two weeks at a time.
6. When a book is kept out over time, a fine must be paid at the rate of one-half cent a day for each day over two weeks.
7. Any one failing to pay a fine within ten days after it is due, or failing to have a book properly charged to his or her name by the librarian, at the

time of taking it from the library, will forfeit all right to the use of the library for one month for each offense.

8. All right to the use of the library is withdrawn from any one damaging any part of said library, until damage has been made good.

The boxes will be sent out to schools when they may be in operation, and must be returned to the office of the county school commissioner when the school closes, if the vacation be longer than two weeks.

Upon receipt of a box the teacher must see that it contains the books that belong to it as per the printed list accompanying, and then receipt for the same by entering his or her name and the date received in the record book accompanying the box. If any books are missing, the teacher should make the proper exceptions before signing, and promptly report such shortage to the commissioner.

The teacher must keep in the above-mentioned record book an accurate record of each book taken out, noting the name of the pupil, the title of the book, the date taken out, and the date returned.

The good accomplished by the library will depend in a great measure on the teachers. They should themselves carefully examine the books, and see that proper selections are made by the individual pupils according to their grades and needs.

The teacher will be held responsible for the circulation of the books; see that none are lost, and all returned on time. Negligence on the teacher's part will greatly retard the accomplishment of the good for which the library has been instituted.

These libraries have been available to our public schools for about two years, and their success has been marked. Possibly the best means of showing their reception and capabilities is by introducing the testimony of a few witnesses—teachers in the schools of Newton county, who have had the libraries in their schools.

The following is from J. A. Cowan, principal of Mansfield school:

We have used a number of boxes from what is known as the traveling school library. To say that we are pleased with their use, is to put it very mildly.

A very large majority of the pupils read these books. They are also sought after by those not in school.

Their first and most immediate effect is upon the order of the school-room. They help in a large measure to solve the question of how to keep order in the room. The children are anxious to finish lessons assigned so as to put spare time on their favorite books. Thus work for all, all the time, is furnished for the dull as well as for the most apt.

Another most notable effect is upon the children themselves, as shown by the improvement in their use of language, together with their increased taste for good literature.

A last but not least good result from use of the library is the increasing demand for and use of the dictionary.

The only suggestion we would offer is that we trust the board may see its way clear to increase their number.

The following is from Mortimer Hays, principal of Hayston school:

The books are doing much good in my school. I can see that the children's minds are enriched, as evidenced by the frequent allusion, in ordinary conversation, to what they have read. Their appreciation of the thought in their reading lessons is much increased by the library.

The intellectual attainment of country children upon the whole is not coequal with that of the cities and towns. Many physically large pupils are tiny little folks from a literary standpoint. The library furnishes good intellectual food for these infants.

The general interest manifested is very pleasing to me. Parents request through their children that I send a book which they themselves would like to read. I have been called upon for books by those not directly interested in the school. We are sure that very much good is being done in our community.

Another from Miss Josie Webb, teacher of Woodlawn school:

The number of books read increases with each successive library, and as the pupils become better acquainted with the books and more accustomed to reading them.

I think every child in school who could read at all, with possibly one or two exceptions, read some of the books. Several of the very small children, who had not yet learned to read the books, were eager to take them home for their parents to read to them.

I think the libraries are certainly doing good for my school in creating a taste for good reading among both pupils and patrons, which I am glad to see they are cultivating.

The following is from Miss Maggie L. Webb, principal of Jefferson Academy:

I am very much pleased to state that the books have awakened the interest of my pupils to a great extent. They especially delight in nature stories. After having read the books, they like to ask questions about different plants and animals, and also examine the different objects themselves and tell what they have learned.

All my pupils read the books, and some of my patrons read them.

Many children have an opportunity for cultivating a taste for good literature who otherwise would not, if it were not for the wise action of the board of education in providing the schools with the traveling libraries.

G. C. Adams, principal of the Pine Grove Academy, writes as follows:

I feel sure that the pupils are benefited. Often they have bits of infor-

mation which they get from the books. Of course the influence is like the growth of a sturdy oak, very slow; but surely much good will be derived from the books in the end.

About fifty per cent. of the patrons read the books. Some of them send word to me that they enjoy reading them very much.

I think, with some help from teachers, these libraries will become intellectual levers which will lift the communities in which they are used upon a higher moral and educational plane. One patron who is too deaf to enjoy conversation enjoys reading during the long winter evenings. Sometimes when we have miscellaneous discussions on Friday afternoons, the pupils relate stories that they have read in some library book.

The following is from H. B. Adams, principal of Brickstore Academy:

I believe the libraries are doing a great good in my school. It arouses and stimulates a love for good books, something that has heretofore been sadly neglected in our country schools.

A few of the parents take an interest in the library.

Some of my pupils read some of the books so much that they have just worn them out.

The small ones think it quite an honor to have read a book, and so they go right at it as soon as they can read a little in the first reader.

The following is from Thomas J. Gardner, principal of Gum Creek school:

The libraries excite an interest in even the duller pupils for reading and a love for learning.

Even the people not patrons of my school take great interest in reading the biographies and travels, and get information on any general line.

People who have had very meager advantages along educational lines avail themselves of the opportunity of reading a free library.

A very poor widowed lady sent to me the other day to know if she might have a book to read.

The benefit and appreciation of books cannot be too highly estimated by the school and the community at large.

The following is from J. D. Cornwell, principal of the school at Starrsville:

The pupils who read seem to have a better command of language, and seem to better understand explanations. Discipline is easier, as pupils when they have learned their lessons will read a book instead of doing something that would be of less profit to them.

The books are not only read by pupils, but by other members of the family.

In most communities there are very few books except the libraries.

When the pupils have read the books in one library, they won't let the teacher have any peace until he gets another.

Dr. J. E. Martin, patron of Hopewell school, writes as follows:

I cannot say how much interest is shown by the community at large in the books. I myself have read a book in the school library that I had heard of all my life but never had an opportunity to read before. It certainly is the easiest and cheapest way of obtaining a quantity of good reading and doing the most good to the greatest number with the same amount of money.

I have always thought that Mr. Carnegie could do more good in this way than in contributing to the cities which have so many advantages anyway.

A consolidation of reports from nine schools shows the following to be the order of popularity of subjects: (1) biography, (2) adventure, (3) fiction, (4) history, (5) nature, (6) travel, (7) miscellaneous, (8) poetry. It shows also that ninety per cent. of the books contained in the libraries are read, and that ninety-six per cent. of the pupils read the books.

Testimony has been introduced above from more than one-fourth of the white schools of Newton county, which should be a sufficiently large percentage to demonstrate the usefulness of the libraries in our rural communities. Since this experiment made within the limits of a county has proved a success, I would suggest an enlargement of the scheme into a system of traveling libraries which would cover the entire state.

Let each county board of education have its own system of libraries suited to its peculiar needs and maintained at its own expense; but in addition to these, there should be a system of traveling libraries belonging to all the counties in common and subject to the call of any individual county when wanted. In this way, special collections of books on selected subjects, frequently too costly to be purchased by each county for its own system of libraries, would be available at but slight expense to the individual county. A community having a study club, a debating society, a farmers' club, or in fact any association for mutual improvement, could be furnished with selected reading-matter bearing directly upon the subject to be considered, and that too from the leaders of thought in that particular realm. For instance, special collections could be made for study clubs suitable for the study of history in general or of any country in particular, as France; or of any special period in that country's history, as the French Revolution, or the rule of Napoleon; so that, according to the minuteness of the investigation to be pursued, from thirty to fifty volumes of selected reading-matter

might be furnished bearing directly on the subject being considered. So collections could be made covering hundreds of other subjects, such as farming, in general; sheep and cattle raising; corn, cotton, and tobacco culture; hay and grain crops; manures and soils; intensive farming; dairying; household economics; child study; social science; finance; free trade and protection; education; teachers' methods; American literature; German history; Spanish war; Monroe doctrine; and so on, *ad infinitum*.

These libraries should be equipped by a library commission appointed by the governor, the state school superintendent being an *ex officio* member and the executive officer. The headquarters of these libraries should be the state school superintendent's office, and they should be sent out only on requisition of the county school superintendent, and he should be held responsible for the same.

The teacher of the public school in each community should be the local librarian, giving out and receiving individual books, and responsible to the county school superintendent; the local librarian to hold the individual borrower responsible for any infraction of the library rules.

The machinery for such a system is already in existence, and the whole scheme could be set in operation at a cost of less than one per cent. of the public school appropriation. Nothing would be more helpful to the educational interests of the people at large, or tend more to strengthen and popularize the present public school system.

With books to read, the rainy day on the farm need no longer be an object of dread; the long winter evenings would become a time of intellectual growth. A common bond of interest would unite parent and child, and intervals of rest and recreation would be made more pleasant by the discussion of topics suggested or enlivened with new interest by their reading. The specter of lonesomeness which now haunts the housewife would in a large measure be dispelled. The children reared far from the petty jealousies and social dissipations and vices of town life, breathing the healthy and moral atmosphere of the farm, and with mind and heart open to receive the truth, would develop on normal, natural lines into intellectual beings stamped with the image of their Maker.

Improved surroundings would cause the present dissatisfaction with farm life in a large measure to disappear. Intellectual quickening would in turn cause growth in many lines. Study clubs, debating societies, lyceums, lectures, concerts, and other means of improvement and recreation, would follow in time to add their charms to rural life; that purest, noblest, most independent, most ideal of all lives—the life of a country gentleman.

So would we take the various influences emanating from our country churches and public schools, stretching from side to side of our rural communities, and through them would we send back and forth the tiny shuttles called traveling libraries, weaving these bright threads into a noble mental fabric which shall clothe our people as with a garment.

# GOOD ROADS.

---

BY PROF H. H. STONE, M.A.,

EMORY COLLEGE, OXFORD, GA.

---

From the *Methodist Review*, Nashville.

July-August, 1896.



## GOOD ROADS.

BY PROFESSOR H. H. STONE, M.A.,  
EMORY COLLEGE, OXFORD, GA.

WHETHER or not it be true of the American people as a whole, it can be said of such portion of them as my observation covers, that questions concerning the nation or state at large readily engage their attention, while the seemingly small county matters, which affect the *individual* much, are too generally overlooked. The nomination and election of a president, events which can at best have but small effect upon the individual, absorb the attention of our citizens a full twelvemonth before his inauguration; while the nomination of a county board of commissioners of roads and revenues, which shall come in contact with every citizen directly and indirectly, and whose actions will affect the value of every piece of property in the county and the taxes thereon, is allowed to go by default. It is comparatively easy for a stranger—a salaried agent, or some one attempting to make a fortune by the furthering of some scheme—to come among us and begin to talk railroad, and immediately the whole community is agog. Men see visions and dream dreams; town councils vote concessions; citizens contribute land and donate rights of way; dirt is broken amid great enthusiasm, and the town is afflicted with that American disease—a boom. When the hazy atmosphere has cleared away and men regain reason, they see that they may have indeed built a railroad, but not for themselves. It is owned by some syndicate, mayhap made rich by their contributions of land and money, and for whose every haul they must pay their hard-earned dimes. How much better it would be for us to expend our enthusiasm and surplus cash on that which will yield a great present and constantly increasing benefit, and that too with comparatively nothing beyond the original outlay.

The conversion of the rights of way of mud and dust and discomfort (by courtesy called roads), periodically worked into shape for more mud and discomfort, into smooth, hard highways, passable at every season with full loads, with comfort

to man and humanity to beast, is a subject which concerns alike the equipage of the millionaire, the team of the farmer, the cart of the laborer, and the feet of the wayfaring man.

Very few of the citizens of the state of Georgia know what good roads are; for most of them have never seen one. They have seen roadways laid off without regard to the shortening of distances between destinations or the securing of the best grades or fewest and least expensive bridges; but because they must be made to pass through Mr. Influential's lands, regardless of loss of time to hundreds of others—who, if no better, are at least as good as he—or the tax of energy and strength and the shortening of days by overwork of every dumb brute whose load should be drawn toward that part of the county. They have seen these same roadways in winter dissolved into a sea of mud and slush, in whose depths many a poor inoffensive beast has lost his life because his master was neither intelligent nor considerate enough to prolong it; many a load abandoned, not through sympathy for horseflesh, but because horseflesh could not be made to overcome that which is allowed by the stupidity of its owners. They have seen them when for many days they were impassable to half-loaded wagons, and when lighter vehicles made passage by sheer force of persistence. Again, they have seen these same roadways hardened by frost in winter or baked by the sun in summer, retaining every rut or hole cut by heavy wheels, until continued travel even in the most approved vehicles was little less than agony. Again, they have seen in summer these same roadways reduced to powder by the grinding wheels, the whole atmosphere beclouded with the dust of passing vehicles, the foliage for many rods on either side the trackway so covered with dust as to have lost appearance of life, travelers and horses breathing with great discomfort the dust which they themselves have made, and from which—no matter what their pace—there can be no escape. Or they have seen patient, overloaded beasts panting through long, weary miles of sand half-hub deep, while their very life seemed to go out with their sweat and steam under the merciless urging of the teamster and the burning rays of the sun. How many times our citizens have been cut off from market, from churches and schools, or perhaps home itself, for many weary days at a time, by the overflow of some intervening stream, insignifi-

cant enough at most times, but converted by rains into a vast flood, not to be crossed because of the absence of a proper grade to the road and lack of a suitable bridge.

Nor are the scenes described above located in Georgia alone. I dare say that with slight modifications they are found in most of our states. By way of contrast, let us look at the condition of the roads in Europe, as shown by the following extracts, taken from recent consular reports made to the Department of State on streets and highways in foreign countries:

The public roads of Belgium enter into successful competition with the railroads, so much so that a man who has his team does not by any means consider himself forced to send his products by rail. These roads are flanked on either side by two, and sometimes four, rows of shade trees, which add much beauty to the country through which they run, and from a distance are particularly picturesque where several roads intersect. One can mark the roads in their windings sometimes as far as the eye can reach, by these fresh green shade trees, which, with the various teams of horse and dog laden with the products of farms, mines, and shop, conspire to make a very pretty scene. Sometimes the wagon itself looks like a sufficient charge for two horses, while wagon, load, and all are drawn by one with the greatest ease. Place the same load on almost any of our roads in the United States, and at least two more, if not three more, horses would be required to pull it the same distance.\*

Or this :

The roads of France are remarkable for their durability, evenness, and cleanliness. They are swept and watered every day and kept in scrupulous order. No rugged eminences or depressions jar the nerves of the traveler riding over them. Neither dirt, decay, nor rubbish is about, to suggest neglect or ill care. They are immense garden paths, amid a marvelous landscape of verdure and cultivation.†

In the high, mountainous regions of the Isère I have seen, after a violent summer rain of thirty-six hours' duration, fifty yards of national road, including a small bridge, washed away by a fearful torrent rushing down from a cloud-capped field of ice with an almost vertical fall of two thousand feet. In three hours, and in the midst of a severe storm, I have seen that same road repaired temporarily and made passable by the road men in this remote and little frequented region. It is this never-failing watchfulness and promptness in repairing roads, coupled with thorough and honest construction, which gives France a system of roads which is at once a source of national strength and of national pride. . . . The wagon roads of France, always passable and reaching all centers of population, no matter how small, are the chief competitors of the railways, as means of com-

\* From Report of Consul Tanner, of Leige, p. 31. † From Report of Consul Knowles of Bordeaux, p. 63.

munication by water are not numerous. The road system of France has been of far greater value to the country as a means of raising the value of lands, and putting the small peasant proprietors in easy communication with their markets, than have the railways. It is the opinion of well-informed Frenchmen, who have made a practical study of economic problems, that the superb roads of France have been one of the most steady and potent contributions to the material development and marvelous financial elasticity of the country. The far-reaching and splendidly maintained road system has distinctly favored the success of the small landed proprietors, and in their prosperity, and the ensuing distribution of wealth, lies the key to the secret of the wonderful financial vitality and solid prosperity of the French nation.\*

And this :

The system of tree culture along the roads of Saxony is the admiration of every American who observes it. The beauty and picturesque appearance of long avenues of finely selected and well-kept trees, stretching away for miles in various directions, gladdens the heart of every admirer of natural beauty. It is, as has been stated, a consideration of less importance than the building of the roads, but the following figures will show the value of a well-governed and faithfully managed system of tree culture on the public highways. In the year 1890 the noteworthy sum of 150,622.55 marks was obtained from the fruit grown along the *state* roads only. The income from trees along country roads is greater.†

If I were asked the cause of *our* bad roads, I should answer, *Our own indifference to the subject*. Many blame our road laws; but these laws, like those on many other subjects, are better than we think, because we have never seen them carried out. It is true that there is very little system in the work done. Most superintendents of roads never think of their duties until a short while before the assembling of the circuit court, when they hasten to fill the holes which are in the roads just then with whatever comes to hand—pluming themselves if they escape the censure of the grand jury. In a few weeks the roads are in as bad condition as formerly, and generally so remain until another court session draws nigh. Very rarely is there an attempt at grading or rocking any part of the road, or toward the doing of anything which may have any permanent value. Repairs are so long neglected that they become well-nigh impossible. Then, too, most of our heavy vehicles, and especially those used for heavy hauling, are more suited to be road destroyers than road helpers. How seldom do we see

---

\*From Report of Commercial Agent Loomis, of St. Etienne, p. 52. †From Report of Consul Merritt, Chemnitz, p. 132.

freight and farm wagons with springs and broad tires; and yet they should have both—the one, to break the force of the jolt as the vehicle trundles along; the other, to roll out the ridges and the ruts. In some of the European countries the width of tire is proportioned by law to the weight of the load, and a penalty is attached for disregarding it. The width varies from two to ten inches; and where the vehicle has four wheels, in no case do the hind wheels follow in the track of the front ones. Thus, where a loaded vehicle with a six-inch tire passes, it rolls two feet of the road, and so becomes a *road* maker instead of a *rut* maker.

We hear so frequently the cry raised that the people are leaving the country and moving to the towns; we hear, too, so much about the discontent and unrest of the farmers that we are led to inquire as to the cause for this state of affairs. One answers: "There is no good school in my neighborhood, and my duty toward my children requires that I should give them the advantages found only in the towns." Another answers: "There are no church privileges in the country to compare to those in the town." Another does not think it justice to his family to have them cut off from the social advantages of the town. So we have answers as many as there are persons to reply.

Some would try to mitigate these evils by the application of one nostrum, while others are equally as sure that they have found the remedy. One suggests the bettering of the public school system; another, the establishment of more school-houses and churches; another, the revision of the tariff; another, the free coinage of silver. While I am not so much of a quack as to claim my prescription to be a panacea for every ill, yet I bespeak for it a careful consideration before its rejection.

Man is essentially a social being, and longs for companionship. Why is it that the boy raised on the farm, ere the down is on his face, begins to turn wistful eyes toward the town? It is hardly because he expects to find easier work, because, though the simplest of his class, he knows that he must work equally as hard for a living in town as on the farm. Why is it that in our cities great multitudes are crowded into dens of dirt and filth, cut off from God's sunshine by blackened walls and a smoke-begrimed atmosphere—the very air they

breathe, which should be a synonym of purity and health, laden with noxious vapors and poisonous stench, when thousands of acres of farm land are untilled, and the pure air and warm sunshine invite them and their children to health? Man likes the companionship of his fellows, and will have it at whatever cost. On the farm there are certain seasons when little outdoor work can be done, and the farmer and his family are shut indoors. The roads at these times are in such shape that a visit to a neighbor, though but a mile or two away, is a thing to be taken in hand advisedly and with due deliberation and caution. Neighborhood clubs or gatherings can exist only in dreams or the wild imaginings of the young, when you are as effectually cut off from the rest of the world by this sea of mud as if you were on some remote island. Unfortunately, on most of our farms the libraries are in a "state of innocuous desuetude." What wonder, then, that the children on the farm—shut up within themselves, with nothing to interest their growing minds but such incidents and things as are inclosed by the farm fence, with not enough training to begin a course of self-instruction, nor enough confidence in the superior knowledge of their parents to go to them for information, yet having an innate feeling that there is something better for them than mere drudgery, something higher than mere animal existence—should almost insensibly cast their eyes longingly townward, where everything seems to their crude imaginations active and astir and interesting and inviting?

Suppose we shift the scene, and view the same actors with different surroundings: the farmer, his family, and his farm are the same, but what different words do they speak. Good roads have been built through the county, and distance is practically eliminated from the social and political problem. Children can now board at home and attend school in town; but there is now no need for that, since there are good schools at their very door. But how come they there now, when before it was almost an impossibility? Now the children for miles around can attend at all seasons without fear of being mired up in the mud, or of being cut off from home by some sudden rain and the consequent rise in the creek. Now, too, schools can be held at all seasons of the year, just as in town, because the good roads make them as accessible to the country children as those in

town are to the children there. Clubs and associations—whether of a social, literary, agricultural, or religious nature—are now a possibility, and soon become a necessity. Meetings which before were confined to the day can now occur at night, thus gaining time. Popular lectures by persons of greater opportunities and broader culture are now a possibility which a three or five mile drive at night need not prevent. With this comes a greater desire for information, and a shelf is set apart to catch the periodicals and books which begin to drift in, until as years go by another and then another shelf is dedicated to like uses. Frequent visits to town, made possible by good roads, have served in some sort to dispel the illusion which overhung town life, and the children are not so dissatisfied with the farm as formerly. They begin to see and realize from hearing and reading and studying, and a consequent quickening of observation, that it is not all of life merely to live—"that life is real, life is earnest." They begin to see and to know that the pure air, the singing of the birds at early dawn, the lowing of the herds at eventide, the silking of the corn, the whitening of the cotton, and the ripening of the grain, under the splendor and glory of God's free sunshine, are more conducive to the development of that which is higher and nobler in them than the rumble of innumerable wheels on the stony street, the clangor of bells or shriek of whistles, the rush and bustle and shove of the sidewalk, or the ring of coin in the countinghouse.

There are more comforts to be observed about the home than formerly, since spare change has been increased by the numerous sales of articles which are now in this era of roads easily sent to town, but which under the old régime of mud were practically wasted. Nor must the increased religious advantages be overlooked in enumerating the benefits arising from the elimination of distance by the bettering of the roads. Congregations need no longer be limited to the one or two Sabbaths per month when their pastor can officiate at their place of worship, but can, if they desire, follow him as he makes his circuit, or can with ease attend other churches, thus sitting constantly under the sound of the gospel. Sunday schools need no longer go into winter quarters, and all may now attend and take part in the study of the word despite the weather.

But in this practical age we are apt to follow the multitude in asking the question, Does it pay? According to the Department of Agriculture of the United States Government, there were on the farms in the United States in January, 1895, 18,226,426 horses and mules, having a value of \$687,658,414; but that we may better understand the matter, suppose we limit our figures to one state. In January, 1895, there were on the farms in Georgia 268,248 horses and mules, having a value of \$15,929,298. Estimating the feeding of a horse at twenty-five cents per day, we see that it costs the farmers of Georgia \$67,062 per day, and \$402,372 per week of six days, to allow their horses to stand idle in their stalls, slowly but surely eating their heads off. This is a loss which can be charged directly to bad roads, for were our highways passable at all times to loaded wagons, there need be no idle days on the farm during the rainy season. There need be no delay for the drying of the roads, as now, before fertilizers can be hauled out from town, thus taking the time which should be given to field work for work which should belong to the rainy day. A few dollars invested in a waterproof covering would allow the moving of any load despite the weather. There are no available data for estimating the lessening of doctors' bills and the untold suffering occasioned by protracted and needless exposure upon impassable roads, or the savings in the wear and tear of wagons, harness, and horseflesh itself, not to speak of the great discount good roads would place upon the profanity of the teamsters, which is now all too common.

Going out from one of our cities, how steadily does the price of farming land on either side the road diminish as we proceed. That which for farming purposes alone is worth in the suburbs some hundred dollars per acre would, were it transported three miles farther out, lose seventy-five per cent. of its value—where the roads are bad. A smooth, hard highway, measurably eliminating time and space, would save some fifty per cent. of this shrinkage in value. That the ordinary farm horse eats his head off every year will hardly be denied, costing his owner from seventy-five to one hundred dollars per year. Good roads would dispense with at least one-tenth of the draught horses. If this estimate be a correct one, we see by referring to the government statistics before quoted



that \$1,592,929.80 now invested by the farmers of Georgia alone would be at once liberated, to be by them applied to their farms in betterments, not to speak of a like sum saved each year in not having the horses to feed. The amount saved, too, in lengthening the lives of the animals, by lessening their exertion in the performance of their work, is an important item to the farmers which cannot easily be estimated in dollars. Hardly less difficult to estimate is the amount which would be saved to the people, now practically wasted, by lessening the frequent bills for repairs sent in by wheelwrights, blacksmiths, and harness makers.

Unless we stop to consider the subject, we would be surprised at the great difference in the capacity for moving which the same team has on different surfaces. As an illustration: our local street-car driver tells me that he has taken in as many as seventy-five fares on a single trip on the occasion of a fire at the other end of the line. Supposing that these fares represented the total number on the car, which is doubtful, and that the average weight of the passengers, most of whom were full-grown men, was one hundred and forty pounds, we have a total of ten thousand five hundred pounds. Add to this the weight of the car itself, which was say six thousand pounds, and we have a load for each mule of eight thousand two hundred and fifty pounds, which was moved with much less apparent effort over the heaviest grades on the track than I have seen a poor mule exert drawing a half-loaded wagon downhill during the muddy season. Nor was this load of sixteen thousand five hundred pounds the limit of the power of the mules, but rather of the capacity of the car. How far would it have been possible for these same mules to have pulled seventy-five people in a wagon on one of our ordinary dirt roads—provided that they could have been packed into the vehicle?

I get the following facts and figures from the Hon. J. W. Robertson, late member of the Georgia Railroad Commission:

General Gilmore by many experiments showed the following to be the force of traction in pounds on different kinds of roads in fair condition, with dynamometer attached to wagon, wagon and load weighing two thousand two hundred and forty pounds. Test made on a level:

Best stone trackway.....	12 1-16 lbs.	Good plank road.....	32 to 50 lbs.
Block pavement.....	32 to 33 lbs.	Broken stone.....	65 lbs.
Gravel on earth.....	140 to 147 lbs.	Common earth.....	200 lbs.

The following table gives the approximate percentages which can be drawn on a level over various descriptions of roads as compared with what can be drawn by the same power over an iron track:

Iron track.....	100	Telford macadam .....	18
Good stone trackway.....	64	Common macadam.....	13
Asphalt .....	60	Cobblestone .....	10
Best block stone.....	30	Gravel over earth.....	5½
Common block stone.....	20		

From the above we see that a horse can draw more than three times as much on a good, solid Telford macadam road as he could on a gravel road; hence one horse can on the Telford macadam do the work of three horses on the gravel road. The manager of Hollywood truck farm, in Virginia, states that a pair of horses can draw over the roads of the farm fifty-five barrels of produce, whereas they can only draw twelve barrels over the roads outside the farm.

Travelers in European countries tell us that one of the most astonishing things to their eyes is the enormous loads drawn with ease by a single horse along the smooth, hard highways, and that, too, to a distance of sixty or seventy-five miles. In many cases a dog is the motive power with which to draw the farm products to market, a distance of ten or twelve miles, two grown persons returning in the wagon. In these countries teams compete successfully with the railroads in hauling freight for any distance under a hundred miles. A problem for our farmers to solve reads something like the following: "If two horses haul the load of four, one wagon of two, one set of harness of two, one driver serve for two, and if six miles instead of three be passed per hour, what per cent. of present expenses could be placed in the profit column?"

But as to the necessity for good roads, hardly anyone will offer an objection. How to get them is the question. Road congresses one after another have been called to consider the question. They have, by calling attention to the need for better roads, caused many to become interested in this vital subject. This feature of their work is bound to bear fruit, I trust, in the near future. Many of their suggestions are worthy of a fuller consideration and a practical test. The substance of the work of several of the last Georgia road congresses was to pass resolutions to the effect that the convicts should be worked upon our roads. While this plan of working convicts on the roads is good, yet it seems too remote, and the benefit

to accrue seems too far removed, nor is uniformity in improvement secured. I, too, would urge the use of the convicts on the roads; but do not let that be the only hope of relief from our present troubles.

The plan I would present for the permanent improvement of the roads is as follows: Let the state issue a sufficient number of bonds with the proceeds of which to construct a first-class road through each county, or rather two such roads—one extending in an east and west direction, the other in a north and south direction; the roads of one county to connect with the similar roads of the adjoining counties, so as to form a continuous system of first-class roads, extending over the entire state. In building these roads, let there be established a road commission of five members, with headquarters in the capital of the state; the state to be divided by them into road districts not less than fifteen in number, and more in their discretion—each district to be in charge of a capable engineer, who in turn shall be under an engineer in chief. It would be the duty of the district engineer to locate, subject to the approval of the engineer in chief, the roads to be built in his district, locating them not necessarily on the old thoroughfares, but taking into consideration the most direct and shortest routes, the grades, bridges, cost and accessibility of material, and other advantages which we may group under the head of general availability. Should there be dissatisfaction on the part of the citizens, or any considerable part of them, as to the location of the road, an appeal could be made to the engineer in chief, and from his decision to the road commission—the decision of that body to be final. It should further be the duty of the district engineer thoroughly to inspect, and accept or reject, all material and contract work.

All roads built by the road commission should be first carefully surveyed and located by competent engineers, the cost fully estimated, and the details of construction perfected before work is begun. The grade should nowhere be greater than one in twenty, the roadway to be in no case narrower than thirty feet, exclusive of drains or ditches, and to be metaled with crushed stone for a width of not less than sixteen feet and a depth of not less than twelve inches; sewer pipes to be used to throw the road across all drains and small streams,

stone culverts to be built for all streams of the second class, while all bridges across streams of the first class, where possible, should be of steel, or, if built of wood, should be supported on granite piers; the surface of the roadway in *all* cases to be above high-water mark. Let the roads constructed on the above plan be the roads of the first class—built, and if need be kept in repair, by the state. Let all other roads in each county be kept in repair by the convicts of that county, supplemented by the income derived from road taxes and such special *ad valorem* taxes as may be levied in that county for road purposes. All these roads, as those of the first class, should be first carefully surveyed and located without reference so much to existing roads as to best grades, the greatest convenience to the greatest number of citizens, and with regard to the cheapest construction of roadbed and bridges.

But the question may arise, Why should the state take the problem of road-building in hand; why not leave it for each county to settle for itself? I would answer that this plan possesses the immense advantage of giving immediate and uniform relief, not leaving the matter to the discretion and slow action of the officers in charge of affairs in the various counties, who, with varying and in many cases insufficient ideas of road improvement, might delay too long the needed improvement; nor would there be any guarantee either that the roads of adjacent counties would be joined to each other so as to form a continuous system extending over the whole state, or of a standard degree of excellence of construction.

The increased receipts in the state's income, arising from increased values in tax returns, traceable directly to better roads, would soon pay off the bonds issued for road construction, besides keeping them in thorough repair.

Should the state once build a first-class road through a county, there would be little doubt as to the county's building the remainder. Such an object lesson could not be lost upon even the most stupid one who claims the right of citizenship, and popular opinion would clamor for similar roads to be built throughout the whole county.













